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Priority Paper

PATENT
OHH-P-23

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : METHOD AND APPARATUS FOR ATTRACTING MARINE CRUSTACEANS TO A DESIRED LOCATION

Robert McNeil :

Serial No: 10/008,640 : Group Art Unit: 3643

Filed: November 8, 2001 : Examiner: Olszewski, Joan M.

SUBMISSION OF PRIORITY DOCUMENT

Box Non-Fee Amendment
Commissioner for Patents
Washington, DC 20231

Sir:

In response to the Office Action mailed July 11, 2002, an **Amendment and Response** was forwarded to the U.S. Patent and Trademark Office on October 11, 2002. It was intended to include a Certified copy of priority document, Canadian Patent Application No. 2,325,291, filed November 8, 2000, as a part of the **Amendment and Response**. However, inadvertently, the Certified copy was not included with the **Amendment and Response**.

Forwarded herewith is a Certified copy of priority document, Canadian Patent Application No. 2,325,291, filed November 8, 2000.

Respectfully submitted,

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October 17, 2002

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Box ~~NON-FEE AMEND~~ Assistant Commissioner for Patents, Washington, D.C. 20231
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Canadian Patent Office

Certification

This is to certify that the documents attached hereto and identified below are true copies of the documents on file in the Patent Office.

Specification and Drawings, as originally filed, with Application for Patent Serial No: **2,325,291**, on November 8, 2000, by **ROBERT MCNEIL**, for "Method and Apparatus for Attracting Marine Crustaceans to a Desired Location".

Agent certificateur/Certifying Officer

September 17, 2002

Date

Canada

(CIPO 68)
01-12-00

OPIC CIPO

Method and Apparatus for Attracting Marin Crustaceans t a Desired Location

The present invention relates to a method and apparatus for attracting marine crustaceans to a desired location. In particular, the invention relates to a method and apparatus for attracting crustaceans to a desired location by emitting certain sound waves from that location.

Lobsters and other marine crustaceans prefer as their habitat areas which provide crevasses, orifices and other geographical features which enable the lobsters to hide from their predators yet still access their food supply. Such habitats include ocean reefs, cobble bottoms, and areas with rocks or boulders. There is a background noise of splashing, gurgling and moving water inherent to these preferred habitats which results from the impact of water in the form of waves, current or tidal shift on the reef, boulder or other such geographic feature. The apparatus of the present invention emits a sound which simulates the sound of these preferred habitats. When the apparatus is placed in a lobster trap and the apparatus emits the simulated sound, lobsters and other marine crustaceans are attracted to the source of the sound and enter the trap. As a result, the use of the apparatus significantly increases the number of lobster and other marine crustaceans caught over a certain period of time which, in turn, increases the productivity and profitability of the lobster harvester.

The apparatus of the present invention is comprised of a container having a container body and a lid. An integrated circuit board with a microchip, a power supply and a speaker are housed in the container body. The apparatus is illustrated in Figs. 1 and 2. Fig. 1 is a perspective view of the apparatus with the lid *in situ* on the container body. Fig. 2 is a perspective view of the apparatus with the lid removed. The contents of the container are shown in Fig. 2.

The container is manufactured from water-proof, high impact plastic to enhance its durability and to minimize the weight of the apparatus. In the preferred embodiment, the container is parallelepiped-shaped Other shaped containers are not beyond the scope of the invention. The container is sized to be sufficiently small to conveniently fit through the hatch of the lobster trap and sufficiently large to house the required components. The container has a lid which can be opened and/or removed from the container body. Once the required components have been installed in the container body, the lid is placed on the container body

and fastened to it with stainless steel screws or any other suitable fastening means that are relatively resistant to corrosion. An "O" ring may be used to form a water tight seal between the lid and the container body. Alternatively, the lid may be heat sealed to the container body.

The integrated circuit board has a microchip on which the attractant sound has been recorded. An example of a suitable microchip is the ISD 2560 manufactured by Information Storage Devices. The circuit board is wired as illustrated in Fig. 3 or in any other suitable manner. A simulated preferred habitat sound can be generated by pumping water through a vent in, for example, a lobster containment area. The sound is recorded on the microchip for a duration of 30 seconds and is then digitally looped to reproduce the sound on a continuous basis. Alternatively, the natural sound of the preferred habitat can be recorded for re-emission. The microchip has a temperature rating which exceeds the temperature range of the body of water into which the apparatus will be submerged.

The speaker has dimensions which enable it to readily fit in the container, for example a speaker with a diameter of 1 ¼ inches and ¼ of an inch deep. The speaker has a mylar cone and supplies an 8 ohm load. The speaker is wired to the circuit board in a suitable manner.

The power supply must be sufficient to operate the microchip. In the preferred embodiment, a 9 volt lithium battery is used. The power supply is wired to the circuit board in a suitable manner. The power supply is generally intended to last for the duration of at least one lobster fishing season. an external switching means could be installed on the container to permit completion of the electrical circuit which allows operation of the unit in environments other than underwater. A heat wrap system, whereby a wire wrap is placed around the battery to keep it warm and operating at peak power in the event of extreme cold water, may be used to ensure that the power supply maintains full power output in any temperature where the apparatus may be located. Other methods of ensuring the battery provides peak power may also be used.

One wall of the container body has two corrosion resistant electrical contact points which extend through the container wall and are wired to the power source. The contact points may be manufactured from stainless steel or any other suitable material. In the

alternative, an external switching means can be on the exterior of the container to manually activate the apparatus before it is submerged.

Once the components have been installed, the container body may optionally be filled with silicone prior to installing the lid. The silicone serves to provide additional protection to the components from the salt water in which the apparatus is immersed in the event that there is a fault in the integrity of the seal. The silicone also acts as a cushion to help absorb some of the shock and movement imposed by the water conditions on the ocean floor. The further acts as a thermal insulator.

The apparatus can be used with either the older style wooden lobster traps or the new style metal parallelepiped-shaped newer style traps. The fisher installs the apparatus in a trap by simply inserting it through the hatch. The apparatus may be secured to the floor or the wall of the trap by means of a bracket, straps, screws, clips or any other suitable fastening means. In the alternative, the trap may be fitted with a wire cage to house the apparatus. In the further alternative, the trap may not be fixed to the trap in which case it would simply rest on the trap floor. The fisher then throws the trap over the side of the boat as is customarily done in the lobster fishing art. Once the trap sinks and the apparatus is submerged, the water activates the contacts which, in turn, completes the circuit and activates the apparatus. Upon activation, the simulated sound of the preferred habitat which was recorded on the microchip is emitted through the speaker. Lobsters within the vicinity of the apparatus, sense the sound and, believing it to indicate that food and protection from their predators are available to them at the source of the sound, are attracted to and move towards the apparatus. The lobsters which have been attracted enter the trap which contains the apparatus, or may enter other traps in the same line as the trap in which the apparatus is installed. Although the best results are obtained when the apparatus is placed in every trap on a trap line, the invention is effective when the apparatus is placed in just a portion of the traps on a line.

When the apparatus is in regular use, the contact points are intended to be cleaned on a periodic basis to ensure completion of the circuit, for example once per week. To clean the contacts, the fisher simply rubs an abrasive scuff pad, which may be sold with the apparatus or separately, over the end of each contact for several seconds. The contacts can be cleaned in this manner when the traps are brought out of the water to be routinely checked for lobster. As the contacts are located on the exterior of the container body, they can be accessed by the

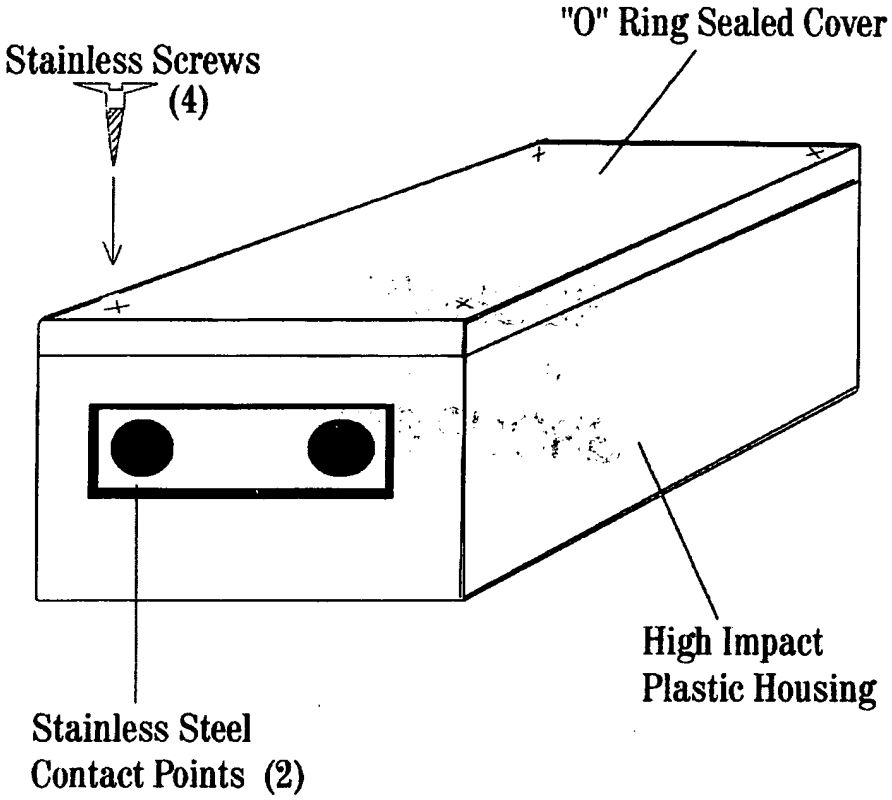
fisher without the fisher having to remove the apparatus from the trap. Thus minimal fishing time is lost as a result of the necessity to clean the contacts.

When a trap containing an apparatus is removed from the water and the circuit between the contacts is broken, the apparatus deactivates. This deactivation advantageously conserves the power supply when the apparatus is not in use. Such deactivation occurs when the traps are removed from the water to check for lobster and remove any lobster which has been caught, or between seasons when the traps are not in use. Once the power supply has been depleted, the apparatus is intended to be discarded. The lobster harvester can readily determine whether the power supply is depleted by connecting the contacts with a piece of metal. If the simulated preferred habitat sound is emitted, the power supply is not yet depleted and the harvester can continue to use the apparatus. A suitable metallic tool can be provided with the apparatus for this purpose. Other conventional means of monitoring or testing power supply can also be used.

The apparatus can be used with or without other forms of bait.

The apparatus is sufficiently robust to withstand rough water and adverse weather conditions to which lobster traps are often exposed. The apparatus also has no moving parts which reduces the likelihood of malfunction due on mechanical failure.

The physical conditions of lobster habitat around the world vary widely and the parameters of the apparatus can be modified to adapt to these various conditions. In addition, the apparatus can be adapted for use as a baiting device of other marine crustaceans and marine animals.



This Housing may change down the road as smaller components become available. The present Housing measures at: 15cm x 10cm x 5cm. The shape of the unit will remain the same as it conforms to most trap sizes and designs.

FIG. 1

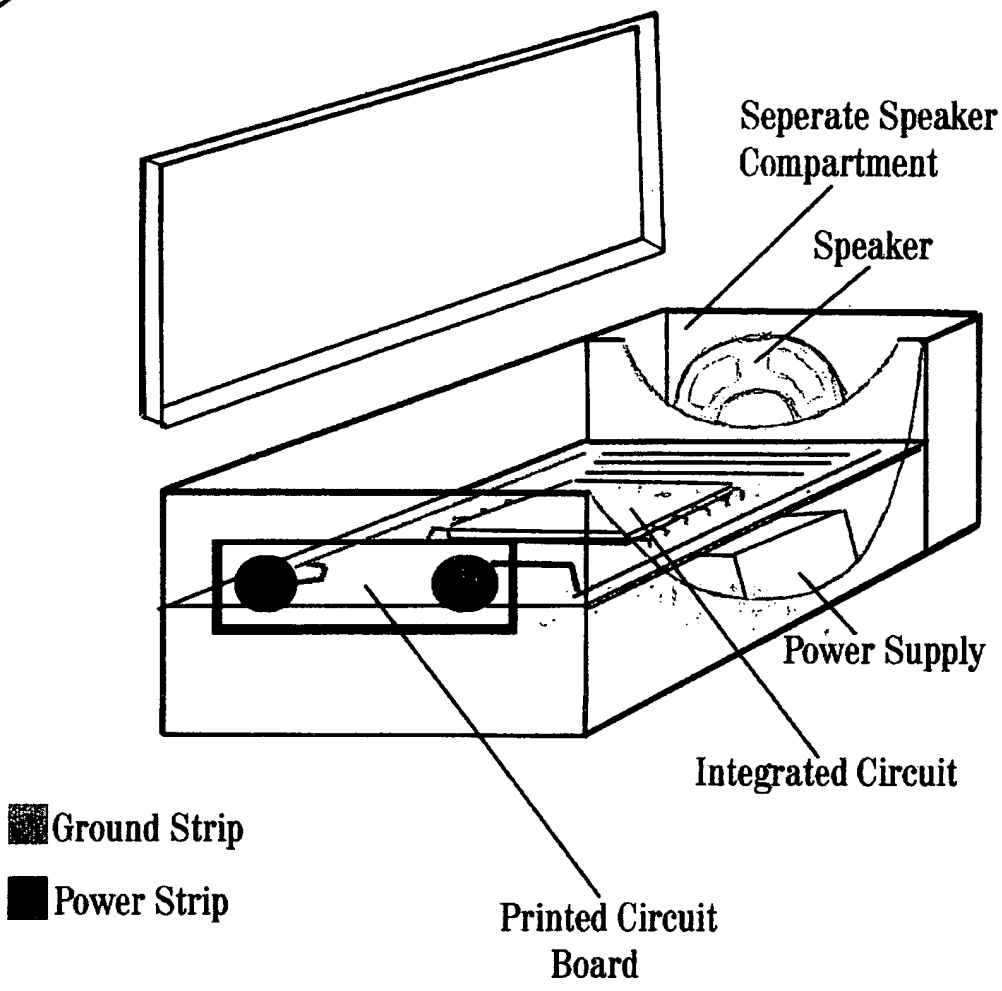


FIG. 2

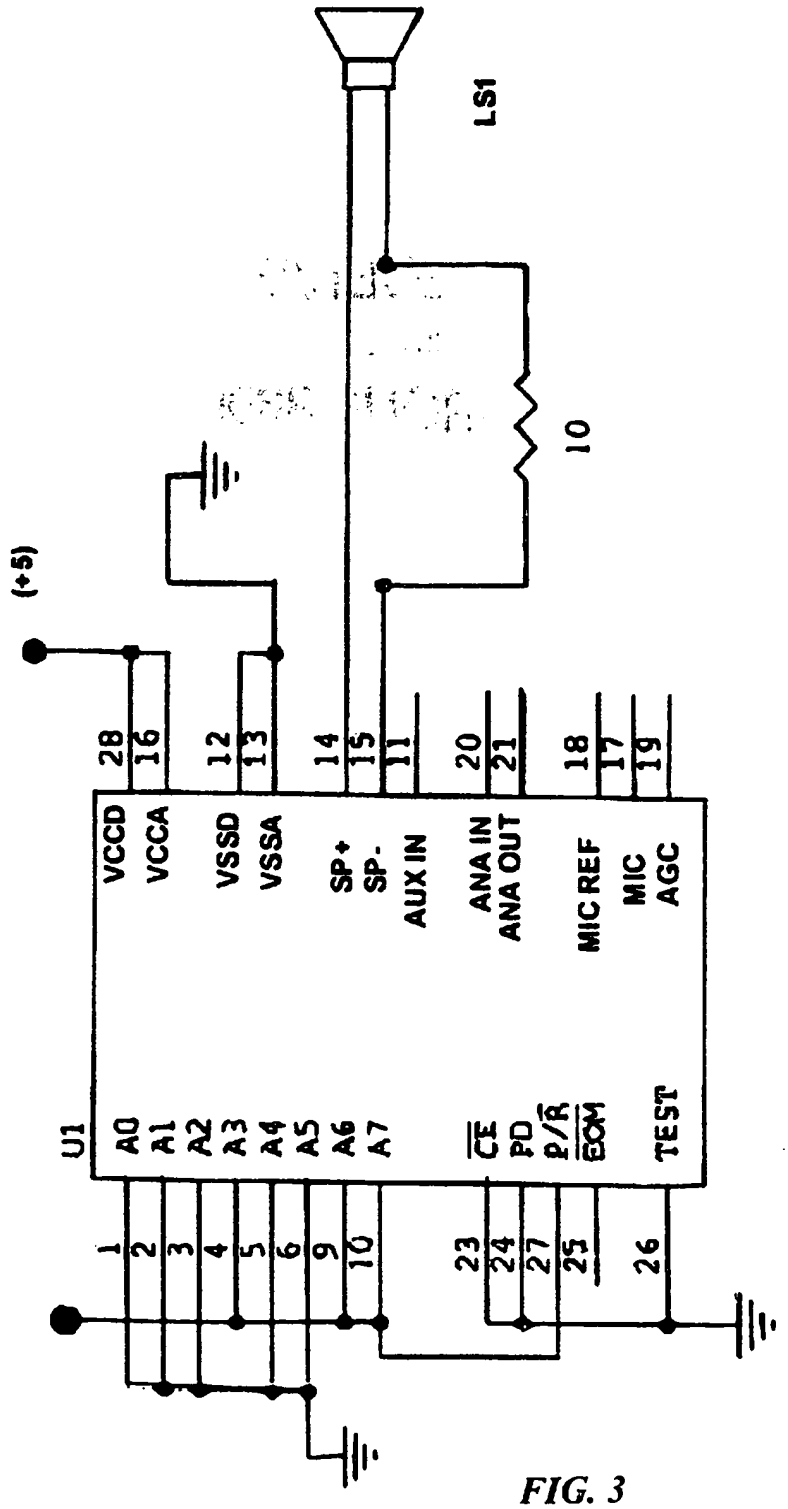


FIG. 3